Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matters of	)	
	)	
Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System	)	PS Docket No. 15-94
	)	
Wireless Emergency Alerts	)	PS Docket No. 15-91

REPLY COMMENTS OF AMERICA'S PUBLIC TELEVISION STATIONS AND THE PUBLIC BROADCASTING SERVICE

America's Public Television Stations ("APTS")[1] and the Public Broadcasting Service ("PBS")[2] (collectively "Public Television") submit these reply comments in response to the Commission's request for input to refresh the record on the feasibility of including multimedia content in Wireless Emergency Alerts ("WEA") messages.[3]

Public Television and its member stations have undertaken significant work to contribute to public safety and emergency alerting across the country. Public Television is uniquely qualified to support the Emergency Alert System (EAS) and WEA system due to its interconnected nationwide reach, community involvement, and mission-based service to the public. PBS is also an active member of the Alliance for Telecommunications Industry Solutions (ATIS), a standards development body that is engaged in the WEA improvement process.

[1] APTS is a non-profit organization whose membership comprises the licensees of nearly all of the nation's CPB-qualified noncommercial educational television stations. The APTS mission is to support the continued growth and development of a strong and financially sound noncommercial television service for the American public.

[2] PBS, with its 350 member stations, offers all Americans the opportunity to explore new ideas and new worlds through television and online content. Each month, PBS reaches more than 103 million people through television and over 33 million people online, inviting them to experience the worlds of science, history, nature, and public affairs; to hear diverse viewpoints; and to take front row seats to world-class drama and performances.

[3] Parties Asked to Refresh the Record on Facilitating Multimedia Content in Wireless Emergency Alerts, *Public Notice*, DA 18-302, PS Docket Nos. 15-91, 15-94 (rel. Mar. 28, 2018).

The PBS Warning, Alert, and Response Network ("WARN") provides a hardened reliable backup to the primary WEA system, with a fully redundant design that leverages public television's coverage to send WEA messages over public television transmitters that cover virtually all of the population of the United States and its territories.[4]

In response to the Commission's inquiry on the feasibility of multimedia content in WEA messages, Public Television notes that first responders and the public at large increasingly rely on the importance of video technology to increase situational awareness and to take effective responsive actions. Further, Public Television has always supported continual improvement of the effectiveness of the WEA system.

However, Public Television would be concerned with any changes to existing WARN responsibilities or inputs to WEA that would alter the format or capabilities of WEA messages if such changes would materially increase the bandwidth required to pass through such messages. While Public Television's commitment to the WARN program is unwavering, it is important to note that public stations are working with public safety entities locally in their communities and across their states to leverage the capabilities of broadcasting to distribute essential information during emergencies, and as such, must carefully guard bandwidth to ensure that these vital services remain available to communities and first responders.

For instance, the APTS membership adopted a resolution that pledged in principle to devote one megabit per second of digital capacity by public television stations for participation in the FirstNet public safety network. Numerous public stations are using datacasting to leverage their broadcast infrastructure to deliver encrypted and targetable IP data alongside their digital television programming. This combination allows for a nationwide wireless IP delivery network that is natively multicast, just like the TV signals it occupies. The Department of

[4] Warning, Alert, and Response Network Act, Pub. L. 109-347, Title VI, §606(b).

Homeland Security (DHS) Science and Technology (S&T) Directorate produced a short video about exploring spectrum options for public safety use that highlights the capabilities of public television stations and public television's commitment to providing the bandwidth for public safety and alerting uses.[5]

APTS is working with the California Governor's Office of Emergency Services (CAL OES) and local public television stations on a multi-year project to develop a robust high-speed data delivery capacity for time-sensitive earthquake early warnings in California's most populated areas. The pilot test at the Sacramento public station yielded early earthquake warnings in fewer than three seconds.

Potential benefits of an earthquake early warning system include the following:

- Public Warning – Alert individuals to drop, cover, and hold on or safely stop vehicles.
- First Responder Mobilization – Open fire station doors for rapid deployment of emergency response equipment and personnel.
- Medical Services – Notify surgeons and dentists to stop delicate procedures and maintain critical medical facility operations.
- Utility Infrastructure – Safeguard energy sector grid and other utility infrastructure for strong shaking with warning alarms and automatic controls to prevent combustions, flooding, and loss of water distribution systems.
- Mass Transit Systems – Prevent fatal collisions by automatically slowing and stopping trains, clearing bridges, and diverting inbound airport traffic.
- Workplace Safety – Evacuate employees to safe locations, initiate elevator recall procedures to ground floor, place sensitive equipment in safe mode, secure chemicals and hazardous materials, and halt production lines to reduce damage.

Recent DHS sponsored pilots, through its Science and Technology Directorate's First Responder Group (FRG), working with the John Hopkins University Applied Physics Lab (JHU/APL), took place in Houston and Chicago. In Houston, software was installed on a Sonim band 14 phone, which was then ingested by the datacasting dashboard and from there was

[5] *See* Datacasting in 100 Seconds, DHS Science and Technology Directorate, *available at* www.youtube.com/watch?v=NeJ81_RtBhY (Dec. 10, 2015).

distributed to multiple remote recipients. While datacasting over digital television is natively one-way, public television stations have demonstrated band 14 LTE integration to create a two-way capability. This capability is currently being used by the Houston Police Department and Houston Fire Department over the band 14 system in Harris County, Texas, in collaboration with Houston Public Media.[6]

The Houston Police Department used this capability with Houston Public Media during the Republican Presidential Debate in February 2016. Harris County also hosted an exercise to evaluate datacasting as a way to distribute video and other situational awareness data through Houston Public Media during a simulated incident.[7] This event won the top honor at a Secured Cities conference. It was the first time judging for the top award was unanimous.[8] Harris County used datacasting again for multi-agency coordination during the NCAA Men's Basketball Championship Final Four in April 2016 and for the Super Bowl in January 2017.

The Chicago Police Department and Chicago Fire Department have also tested a similar pilot through the DHS S&T Directorate. The pilot used using the WTTW public television transmitter on top of the Willis Building in downtown Chicago and involved law enforcement and search and rescue operations with the U.S. Coast Guard on Lake Michigan.[9]

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[6] Video Datacasting: Houston Pilot After Action Report (Oct. 2015), *available at* https://www.dhs.gov/sites/default/files/publications/Houston%20Datacasting%20Pilot%20After%20Action%20Report.pdf.

[7] Datacasting Pilot Project, Houston Public Media, *available at* https://youtu.be/tsJfiJQggYQ (Nov. 10, 2015).

[8] Security Technology Executive, vol. 25, "City of Houston Collaboration Leads to Innovative Solution for First Responders," 16–20, *available at* http://securitytechnologyexecutive.epubxp.com/i/618378-nov-dec-2016.

[9] Video Datacasting: Chicago Pilot After Action Report (Oct. 2015), *available at* https://www.dhs.gov/sites/default/files/publications/Chicago%20Datacasting%20Pilot%20After%20Action%20Report.pdf.

Conclusion

In conclusion, Public Television plays a key role in the EAS, WEA, and broadcast datacasting systems. Public Television supports any material improvements to these systems that the FCC may determine are beneficial to the public interest, provided that adequate funding and bandwidth for such improvements are available for any affected public television stations and the PBS WARN system.

Respectfully submitted,

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